

WHAT IS CLAIMED IS:

1. An air bag apparatus for a motorcycle including an air bag capable of restraining an operator on a seat from a front direction, in response to expansion of said air bag comprising:

a pair of restraining belts at a right and a left side of the motorcycle, said pair of restraining belts being stored in a vehicle body when said air bag is in a folded state and come into a state of tension on both exterior sides at the right and the left of the operator on the seat when said air bag expands, wherein said air bag and a vehicle body to the rear of said seat are linked via the pair of restraining belts.

2. The air bag apparatus for a motorcycle as defined by claim 1, and further including a vehicle body cover constituting said vehicle body together with a vehicle body frame having a head pipe on a front end thereof, said head pipe supporting a front fork in an orientation-manipulative manner wherein a front cover, which covers a circumference of said head pipe, and an air bag housing for storing said air bag is installed at a forward position of said seat and to the rear of said front cover.

3. The air bag apparatus for a motorcycle as defined by claim 2, wherein, said vehicle body cover comprises, in addition to said front cover, a pair of leg shields at the right and left for covering forward portions of the operator's legs, said leg shields being joined with both right and left sides of the front cover, respectively, a pair of footrest sections, at the right and left connecting, respectively, to the leg shields for supporting the feet of the operator, and a rear cover jointed with the footrest sections for covering both right and left sides of a rear part of said vehicle body frame, wherein,

said restraining belts, an end of which is fixedly linked with said air bag and another end of which is linked with said rear cover, are stored in a pair of storage grooves at the right and left, which are provided over along said front cover, said leg shields, said footrest sections and said rear cover, in such a manner for allowing said restraining belts to be pulled out, in response to a tension thereof, with expansion of said air bag.

4. The air bag apparatus for a motorcycle according to claim 1, wherein said pair of restraining belts include a substantially central portion that is stored and positioned to be adjacent to said air bag when said air bag is a folded state and is released to be disposed in proximity to the air bag and in front of the operator in the expanded condition.

5. The air bag apparatus for a motorcycle according to claim 1, wherein said pair of restraining belts each includes a first end, a central portion and a second end, said first and second ends being secured to said vehicle body for retaining an operator relative to the motorcycle when said air bag is expanded.

6. The air bag apparatus for a motorcycle according to claim 1, wherein the motorcycle is a motorscooter having an open area disposed between a steering handlebar and the seat.

7. The air bag apparatus for a motorcycle according to claim 1, and further including a shock detecting sensor for detecting when a shock not smaller than a predetermined value is applied to the motorcycle for actuating said air bag in response thereto.

8. The air bag apparatus for a motorcycle according to claim 7, wherein the shock detecting sensor is an acceleration sensor.

9. An air bag apparatus for a motorcycle including an air bag capable of restraining an operator on a seat from a front direction, in response to expansion of said air bag comprising:

a restraining belt positioned at a right and a left side of the motorcycle, said restraining belt being stored in a vehicle body when said air bag is in a folded state and comes into a state of tension on both exterior sides at the right and the left of the operator on the seat when said air bag expands, wherein said air bag and a vehicle body to the rear of said seat are linked via the restraining belt.

10. The air bag apparatus for a motorcycle as defined by claim 9, and further including a vehicle body cover constituting said vehicle body together with a vehicle body frame having a head pipe on a front end thereof, said head pipe supporting a front fork in an orientation-manipulative manner wherein a front cover, which covers a circumference of said head pipe, and an air bag housing for storing said air bag is installed at a forward position of said seat and to the rear of said front cover.

11. The air bag apparatus for a motorcycle as defined by claim 10, wherein, said vehicle body cover comprises, in addition to said front cover, a pair of leg shields at the right and left for covering forward portions of the operator's legs, said leg shields being joined with both right and left sides of the front cover, respectively, a pair of footrest sections, at the right and left connecting, respectively, to the leg shields for supporting the feet of the operator, and a rear cover jointed with the footrest sections for covering both right and left sides of a rear part of said vehicle body frame, wherein,

said restraining belt, an central portion of which is fixedly linked with said air bag and another end of which is linked with said rear cover, are stored in a pair of storage grooves at the right and left, which are provided over along said front cover, said leg shields, said footrest sections and said rear cover, in such a manner for allowing said restraining belt to be pulled out, in response to a tension thereof, with expansion of said air bag.

12. The air bag apparatus for a motorcycle according to claim 9, wherein said restraining belt includes a substantially central portion that is stored and positioned to be adjacent to said air bag when said air bag is in a folded state and is released to be disposed in proximity to the air bag and in front of the operator in the expanded condition.

13. The air bag apparatus for a motorcycle according to claim 9, wherein said restraining belt includes a first end, a central portion and a second end, said first and second ends being secured to said vehicle body for retaining an operator relative to the motorcycle when said air bag is expanded.

14. The air bag apparatus for a motorcycle according to claim 9, wherein the motorcycle is a motorscooter having an open area disposed between a steering handlebar and the seat.

15. The air bag apparatus for a motorcycle according to claim 9, and further including a shock detecting sensor for detecting when a shock not smaller than a predetermined value is applied to the motorcycle for actuating said air bag in response thereto.

16. The air bag apparatus for a motorcycle according to claim 15, wherein the shock detecting sensor is an acceleration sensor.

17. An air bag apparatus for a scooter type motorcycle including an air bag capable of restraining an operator on a seat from a front direction, in response to expansion of said air bag comprising:

a restraining net having a first end at a right side of the motorcycle and a second end at a left side of the motorcycle, said restraining net being stored in said vehicle body when said air bag is in a folded state and comes into a state of tension on

both exterior sides at the right and the left of the operator on the seat when said air bag expands, wherein said air bag and a vehicle body to the rear of said seat are linked via the pair of restraining nets.

18. The air bag apparatus for a motorcycle as defined by claim 17, and further including a vehicle body cover constituting said vehicle body together with a vehicle body frame having a head pipe on a front end thereof, said head pipe supporting a front fork in an orientation-manipulative manner wherein a front cover, which covers a circumference of said head pipe, and an air bag housing for storing said air bag is installed at a forward position of said seat and to the rear of said front cover.

19. The air bag apparatus for a motorcycle as defined by claim 18, wherein, said vehicle body cover comprises, in addition to said front cover, a pair of leg shields at the right and left for covering forward portions of the operator's legs, said leg shields being joined with both right and left sides of the front cover, respectively, a pair of footrest sections, at the right and left connecting, respectively, to the leg shields for supporting the feet of the operator, and a rear cover jointed with the footrest sections for covering both right and left sides of a rear part of said vehicle body frame, wherein,

said restraining net, an central portion of which is fixedly linked with said air bag and another end of which is linked with said rear cover, is stored in a pair of storage grooves at the right and left, which are provided over along said front cover, said leg shields, said footrest sections and said rear cover, in such a manner for allowing said restraining net to be pulled out, in response to a tension thereof, with expansion of said air bag.

20. The air bag apparatus for a motorcycle according to claim 17, wherein said restraining net includes a substantially central portion that is stored and positioned to be adjacent to said air bag when said air bag is a folded state and is released to be

disposed in proximity to the air bag and in front of the operator in the expanded condition.

21. The air bag apparatus for a motorcycle according to claim 17, wherein said restraining net includes a first end, a central portion and a second end, said first and second ends being secured to said vehicle body for permitting the net to retain an operator relative to the motorcycle when said air bag is expanded.

22. The air bag apparatus for a motorcycle according to claim 17, wherein the motorcycle is a motorscooter having an open area disposed between a steering handlebar and the seat.

23. The air bag apparatus for a motorcycle according to claim 17, and further including a shock detecting sensor for detecting when a shock not smaller than a predetermined value is applied to the motorcycle for actuating said air bag in response thereto.

24. The air bag apparatus for a motorcycle according to claim 23, wherein the shock detecting sensor is an acceleration sensor.